

Aviation Rulemaking Advisory Committee  
FAR/JAR Harmonization Working Group  
Propeller Driven Small Airplanes  
Concept Paper

A second meeting was held in Gatwick, UK 21-22 February, 1995. A third meeting was held 6-7 July, 1995 in Wichita, Kansas, USA. A fourth, ad hoc working meeting was held 14-15 November, 1995 in Frankfurt Germany.

All of the activity of this working group is summarized in this document. Appendix A contains a table that summarizes all of the items of regulation requiring harmonization. Appendix B contains a set of HWGLPDA Technical Position Papers (LPDA-TPP-xxx) documenting the recommendations for harmonization and a discussion of the reasons for harmonization in each case.

Appendix C contains the minutes of each of four meetings held so far. Appendix D repeats the committee membership list. Appendix E contains co-ordination documents.

The following sections are organized to present first the harmonization activity for actual items of regulation. Second, activity required for harmonization of interpretive material is discussed. Finally a section is included describing the process intended to co-ordinate the harmonization recommendations.

## **2. HARMONIZATION OF REGULATIONS**

Reference Appendix A, table of regulation differences.

### **2.1 Item 1: Applicability, LPDA-TPP-012**

Harmonization is not recommended. The applicability dates have all lapsed.

### **2.2 Item 2: Weight Limit, LPDA-TPP-003**

Referenced TPP highlights that weight differences in the noise certification regulations are arbitrary and inconsistent. As such they could impose an economic burden for manufacturers producing aeroplanes over the limit in one body of regulation and under the limit in the other. Therefore harmonization is recommended and outlined. The change to harmonize affects ICAO Annex 16 and JAR 36. Co-ordination of this change has been started. See Appendix E for co-ordination documents.

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**2.3 Items 3 and 12: Microphone Height and Noise Limits, LPDA-TPP-006**

It is recommended in referenced TPP that FAA adopt JAR/ICAO microphone location and configuration along with associated limits. Change will enhance the public good because it will provide a favorable economic approach to aid investigation of stringency requirements.

**2.4 Items 4 and 5: Tape Calibration and Quality, LPDA-TPP-007**

Harmonization not recommended because the differences between the requirements are small and the economic impact on test procedures is negligible.

**2.5 Item 7: Pre/De-emphasis Recording, LPDA-TPP-012**

Harmonization not recommended because applicable instrument standards are in the process of being revising.

**2.6 Item 6: Meteorological Data, LPDA-TPP-005**

Change to ICAO/JAR has been recommended. Recommended change will allow for increased flexibility in test procedures and will enhance the economic feasibility of testing. Co-ordination of this change has been started. See Appendix E for co-ordination documents.

**2.7 Item 8: No Absorption Correction Window, LPDA-TPP-002**

Change to FAR is recommended. Impact is economic since absence of harmonization could theoretically require two separate tests.

**2.8 Item 9: Adjustments, Absorption Outside Test Window, LPDA-TPP-001**

Change to FAR is recommended. Impact is economic since absence of harmonization could theoretically result in compliance with one body of regulation and not the other. This could require repeat testing.

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**2.9 Item 10: Power Adjustments, LPDA-TPP-004**

Recommended harmonization will require an <sup>change</sup> addition to <sup>FAR</sup>JAR/ICAO Impact is economic and harmonization will reduce economic burden of testing and enhance the public good because power settings will be clarified and defined. No co-ordination has been initiated.

**2.10 Item 11: Reference Noise Level, LPDA-TPP-012**

Harmonization not recommended. The differences are not significant.

**2.11 Item 13: Power Variance, LPDA-TPP-008**

Recommended harmonization will require a change to JAR. This will result in increased testing flexibility. Impact is economic.

**2.12 Item 14: Power Definition, LPDA-TPP-009**

Recommended harmonization will require a change to JAR/ICAO. The result will enhance the public good because it will result in a consistent application of JAR/ICAO by removing a possible ambiguity in the definition of take-off power.

**2.13 Item 15: Helical Tip Mach No. Tolerance, LPDA-TPP-010**

Recommended Harmonization will require a change to FAR. Impact is economic because it will increase flexibility allowed in testing.

**2.14 Item 16: Sound Level Meter Settings, LPDA-TPP-011**

Harmonization not recommended as the difference in wording between the two requirements has a negligible impact on economic and test procedures.

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**Table 1: Summary of Harmonization Items**

Item	Justification	Regulation Impact	
		FAR	JAR/CAO
1. Applicability	LPDA-TPP-012	No Harmonization Recommended	
2. Weight Limit	LPDA-TPP-003		X
3. Microphone Height	LPDA-TPP-006	X	
4. Pseudo-random pink noise cal for recordings	LPDA-TPP-007	No Harmonization Recommended	
5. Tape Quality	LPDA-TPP-007	No Harmonization Recommended	
6. Meteorological Data	LPDA-TPP-005		X
7. Pre/de-emphasis Recording	LPDA-TPP-012	No Harmonization Recommended	
8. No absorption correction window	LPDA-TPP-002	X	
9. Adjustments, absorption outside test window	LPDA-TPP-001	X	
10. Power adjustments	LPDA-TPP-004	X	
11. Reference noise level	LPDA-TPP-012	No Harmonization Recommended	
12. Noise limits	LPDA-TPP-006	X	
13. Power variance	LPDA-TPP-008		X
14. Power Definition	LPDA-TPP-009		X
15. Helical Tip Mach No tolerance	LPDA-TPP-010	X	
16. Sound Level Meter Settings	LPDA-TPP-011	No Harmonization Recommended	